

# Memorandum

To: DISTRICT DIVISION CHIEFS -  
DESIGN, OPERATIONS, PLANNING,  
CONSTRUCTION AND MAINTENANCE

Date: September 30, 1998

Attn: Design Office Managers  
Project Managers  
Chairpersons, District Safety Review  
Committee

From: DEPARTMENT OF TRANSPORTATION  
Design and Local Programs  
Mail Station 28

Subject: New Design for Safety Practice: Roadside Paving

The purpose of this memorandum is to provide guidance and instructions on the implementation of a new design for safety practice. This new design practice has been developed to alleviate maintenance concerns related to the installation or presence of longitudinal walls and barriers (e.g., concrete barrier, retaining walls, abutment walls, and noise barriers) within the roadside environment.

Most roadsides should be designed to minimize the frequency and duration of labor intensive maintenance operations. This is typically work that cannot be readily accomplished by automated means such as litter removal from (and weed control of) unpaved areas immediately adjacent to the roadbed. These unpaved areas may also require periodic grading and annual herbicide application.

The construction of a concrete barrier or wall, beyond the paved shoulder of a highway facility, often creates an unpaved area or "strip" parallel to and between such highway appurtenances and the edge of shoulder. Because such areas can act as debris traps, unpaved "strips" should be paved up to the face of solid barriers or walls which are located 5.4 meters or less from the edge of traveled way in order to facilitate mechanical sweeping. Distances between 5.4 meters and 9.0 meters may be considered and evaluated on a case-by-case basis. Engineering judgement should be exercised in order to balance the achievement of roadside safety objectives with the prudent expenditure of available funds.

The structural section of the additional pavement beyond the standard width shoulder should be designed to accommodate the maintenance equipment that will be used to maintain the area, and it can be marked, delineated, colored, or specially treated to minimize the potential for confusion over its intended use. The additional pavement must comply with the cross slope requirements of the Highway Design Manual.

The median should generally be paved in the same plane as the adjacent traveled way on the outside of the traveled way, the slope to the concrete barrier or wall should be nearly flat beyond the ultimate edge of shoulder, (i.e., maximum slope of 10 percent) before paving is considered.

Additional paving will affect the site drainage design. Particularly when retrofitting existing facilities an analysis of both inlet and system capacities must be performed to verify that the increased runoff will not create flooding or downstream erosion.

Projects in environmentally sensitive locations should be studied on a case-by-case basis before paving is considered for the entire area. Consultation with the District Landscape Architect, Environmental Planning, and Maintenance Manager, early in the project development process, is recommended.

The above described design practice should be incorporated into all projects which propose to create, or perpetuate the existence of, an unpaved area or "strip" as described herein. For projects where the Plan, Specifications, and Estimates (PS&E) have not been finalized, the above design practice should be incorporated unless this would impose a significant delay in the project schedule or a significant increase of cost. Projects in both the design and construction phase should be evaluated for incorporation during the next scheduled safety review. Exceptions to the above must be documented after consultation with the District Maintenance Division Chief and concurrence from the Project Development Coordinator.

If you have questions on this new design practice, or its application to situations not described herein, please contact your Project Development Coordinator or Geometric Reviewer for technical advice.

**ORIGINAL SIGNED BY**

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